

## Hess, Alana

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**From:** Langford, Mallory <mlangford@aeci.org>  
**Sent:** Monday, December 31, 2018 9:16 AM  
**To:** Hess, Alana  
**Cc:** Wells, Jay; Henry, Tadd; Farmer, Kevin; Pinkerton, Blake  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Alana,

We are still working on a response to your question from your email on December 19<sup>th</sup>. However, below are our comments/questions for the New Madrid draft permit that was attached to the October 30<sup>th</sup> email.

- Cover Page
  - o The zip code under, *Installation Name and Address*, should be 63866.
  - o Under the *Installation Description*, the third sentence references “waste oil storage tank(s)”. This should be “used oil storage tank(s).
- I. Installation Equipment Listing, Emission Units with Limitations
  - o Please include the emission unit numbers for easy reference. For example, the cyclone boilers #1 and #2 are EU0010 and EU0020, respectively.
  - o EP-01 and EP-02
    - Bituminous coal should be added to the description
  - o EP-03
    - 40 CFR Part 63, Subpart ZZZZ needs to be included under the Applicable Requirements section
    - The current EDG listed will be replaced by a like-kind diesel generator in 2019
    - Caterpillar C32, 1000kW, 1474 BHP
  - o EP-04
    - 830 tons per hour was added to the description. This is not in our current permit, can you clarify where this number came from?
  - o EP-05A, 05B and 05C
    - Why were A, B and C added to the emission source ID’s? Originally, they were all captured under EP-05.
    - 830 tons per hour was added to the description. This is not in our current permit, can you clarify where this number came from?
  - o EP-06
    - 830 tons per hour was added to the description. This is not in our current permit, can you clarify where this number came from?
  - o EU0290
    - Date should be 2017
  - o EU0300
    - Date should be 2016
  - o EU0500 (Barge Unloader)
    - This has been removed from the permit, however, we wanted to clarify that although the equipment is not in use, it is still onsite with plans of dismantle and removal within the next year.
  - o Fire Engine Pump needs to be added to the permit
    - 40 CFR 63, Subpart ZZZZ as applicable requirement

- Cummins, CFP9EEZSL9, 365HP
  - Was put into service on 05/01/2016
- I. Installation Equipment Listing, Emission Units without Limitations
  - IA-17 should include, Parts Washers: (1) 78 gallons, (1) 36 gallons, (5) 27 gallons, and (1) 15 gallons
  - (4) Diesel Portable Heaters need to be added to the permit
    - Used for space heating in the coal yard tunnels when necessary
    - Allmand, MH-1000 with CAT C1.5 engine
    - Acquired on 11/18/2016
- III. Emission Unit Specific Emission Limitations
  - Permit Condition 003
    - Throughout this section “Director” has replaced “EPA Administrator” and/or “Administrator”. We wanted to confirm that the use of “Director” was in reference to MDNR Air Pollution Control Program’s Compliance/Enforcement Section.
    - We are currently complying with the part 63 Subpart UUUUU PM requirements through quarterly performance tests which is included in the permit condition. Under the “General Compliance Requirements” of this condition, we would like to include the part of the regulation that gives us the option to comply through PM CEMS for future flexibility.
    - Under, #5 of “Continuous Compliance Requirements”, Tables 1 and 3 to MACT UUUUU are referenced, however, it should be Tables 2 and 3 to MACT UUUUU.
  - Permit Condition 005
    - Has CAIR been taken out of the SIP? And, if not, do we need to include it? Will it be out of the SIP by the time this permit is finalized?
  - Permit Condition 006
    - 4. b) of “CSAPR NOx Annual Trading Program Requirements” includes a CEMS reference to part 75 subpart H. This is a reference to SO2 CEMS. This part of the CSAPR regulation only deals with NOx, therefore, the reference should only include subpart B.
    - 3. f) ii) *Limited Authorization* of “CSAPR NOx Annual Trading Program Requirements” does not include a subpart reference (AAAAA), where subparts CCCCC and EEEEE are referenced in their respective sections.
    - The subtitles under “CSAPR SO2 Group 1 Trading Program Requirements” are not italicized.
  - Permit Condition 008
    - Has the incorporation of 10 CSR 10-6.261 into Missouri’s SIP been approved by the EPA? Can this be removed from the permit?
  - Permit Condition 009
    - Several of the requirements under 1. in the “Recordkeeping and Reporting” section are currently being included in the SSM exceedance reports, but not in the quarterly reports. For every exceedance an SSM report is submitted, so we believe that including the information listed below would be redundant and unnecessary. We would like the sections listed below to be removed.
      - a) ii) – Name and number of person responsible for the source...
      - a) vii) – Measure to mitigate...
      - a) viii) – Measures taken to remedy...
      - b) – Maintain a list of modifications to each boiler’s operating procedures...
    - Under “Recordkeeping and Reporting”, 1) a) vi) states that the magnitude of SO2 excess emissions should be reported in lb/hr. However, our limit and the units that we are currently reporting in are lb/MMBtu.
    - Number 4. of “Recordkeeping and Reporting” is redundant and captured with requirements 3. and 5. Can this requirement be removed?
  - Permit Condition 010
    - Update EP-03 description with the new EDG
    - Update the emission sources with the fire pump engine

- Under 2. b) of the “Applicability” section, the permit states that the engine can operate “for any combination of purposes specified in part 63.6640(f)(2)(i) for a maximum of 100 hours per calendar year”. However, part 63.6640(f)(2) states that the engine can operate under any combination of purposes specified in part 63.6640(f)(2)(i) through (iii). Why was part 63.6640(f)(2)(ii) and (iii) not included in the permit? And, can they be added?
  - Permit Condition 011
    - Update EP-03 description with the new EDG
    - Has the incorporation of 10 CSR 10-6.261 into Missouri’s SIP been approved by the EPA? Can this be removed from the permit?
    - The emission limitation is stated in ppmv and mg/m<sup>3</sup>, and the operational limitation is in ppm by weight. Can both limits be stated in the same units for consistency?
    - Number 2. d) of “Recordkeeping and Reporting” requires the heating value of the fuel to be stated on fuel documentation. This is not a current requirement of the existing operating permit, and would be represented by a constant fuel heating value. Can this requirement be removed?
    - Number 4. of “Recordkeeping and Reporting” is redundant and captured with requirements 3. and 5. Can this requirement be removed?
  - Permit Condition 012
    - Update EP-03 description with the new EDG
    - We believe that numbers 1. and 2. under “Reporting and Recordkeeping” should be omitted. The requirements are satisfied by 10 CSR 10-6.050 which is listed under the Core Permit Requirements. In addition, the timeframe stated in number 1. is unclear and could be interpreted that the requirement is to submit quarterly reports. However, being that the compliance method is not CEMS, quarterly reports are not necessary.
    - Number 4. d) of “Recordkeeping and Reporting” requires the heating value of the fuel to be stated on fuel documentation. This is not a current requirement of the existing operating permit, and would be represented by a constant fuel heating value. Can this requirement be removed?
    - Number 7. of “Recordkeeping and Reporting” is redundant and captured with requirements 6. and 8. Can this requirement be removed?
  - Permit Condition 013
    - The monitoring schedule stated in 2. and 3. under “Performance Tests and Other Requirements” is stricter than stated in the equivalent permit condition EU0180-001 through EU0230-001 under “Monitoring We would like the frequency to remain the same as in the previous permit.
    - Number 7. under, “Performance Tests and Other Compliance Requirements”, states that for “units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA test Method 9 opacity observation”. This is inconsistent with the previous permit’s terminology under permit condition EU0180-001 through EU0230-001, “Monitoring”, 1), where the requirement is to perform Method 9 when “units with visible emissions perceived or believed to exceed the applicable opacity standard”. We would like the terminology to be the same as the previous permit.
  - Permit Condition 014
    - Number 4. of the “operational limitations” is no longer part of plant activity. As stated in the construction permit 082006-011, under the project description, a paddle-mixer is now used to add water to the fly ash after it leaves the ash silo. Once properly mixed with water the mixture is hauled to the waste landfill for disposal. Therefore, this requirement can be removed.
    - Number 1. a) of “Monitoring” states that once every 24-hours the operating pressure drop across the control device should be monitored and recorded. The frequency of this activity in the previous permit (Condition PW001) was stated as “periodically”. The common practice of the plant, along with the frequency stated in the Title V Operating Permit of Thomas Hill Energy Center (OP2017-061, Permit Condition PW001, *Monitoring/Recordkeeping*, 1.) is weekly. To

maintain consistency among the plants and to continue the plant's practice, we would like the frequency to be stated at weekly, instead of once every 24-hours.

- Number 1. b) and 2. of "Monitoring" states that Method 22's should be performed once every 24-hours. To remain consistent with the Method 22's performed throughout New Madrid, we would like the frequency to be once every month.
- Permit Condition 015
  - The monitoring schedule stated in 1. and 2. under "Monitoring" is stricter than stated in the equivalent permit condition EU0060-001 through EU0170-001 under "Monitoring". We would like the frequency to remain the same as in the previous permit.
  - Number 6. under, "Monitoring", states that for "units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA test Method 9 opacity observation". This is inconsistent with the previous permit's terminology under permit condition EU0060-001 through EU0170-001, "Monitoring", 1), where the requirement is to perform Method 9 when "units with visible emissions perceived or believed to exceed the applicable opacity standard". We would like the terminology to be the same as the previous permit.
- Permit Condition 016
  - The monitoring schedule stated in 1. and 2. under "Monitoring" is stricter than stated in the equivalent permit conditions EU250-001, and EU0290-003 and EU0300-003 under "Monitoring". We would like the frequency to remain the same as in the previous permit.
  - Number 6. under, "Monitoring", states that for "units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA test Method 9 opacity observation". This is inconsistent with the previous permit's terminology under permit conditions EU250-001, and EU0290-003 and EU0300-003 under "Monitoring", 1), where the requirement is to perform Method 9 when "units with visible emissions perceived or believed to exceed the applicable opacity standard". We would like the terminology to be the same as the previous permit.
- Permit Condition 018
  - Within the "Emission Limitation", the "modified fly ash/bottom ash handling system" was renamed "Utility Waste Disposal Process". "Utility Waste Disposal Process" does not capture all the equipment listed in this permit condition. To remain consistent with the construction permit, we would like the name to remain "modified fly ash/bottom ash handling system".
  - We would like number 2. under "Monitoring/Recordkeeping" to be removed from the permit. As stated under the project description in the construction permit 082006-011, the fly ash is mixed with water in a paddle-mixer. The application of water spray to the fly ash is not an activity performed for its removal.
  - We would like number 4. under "Monitoring/Recordkeeping" to be removed from the permit. The construction permit 082006-011 states under "Emissions/Controls Evaluation", that "Undocumented watering will reduce emissions from the unpaved haul roads by approximately 50". The construction permit was written without the requirement of documenting the amount of water applied to the unpaved haul road. In addition, by complying with operational limitation #3., we are satisfying the requirements of the construction permit.
- Permit Condition 020 – Does not exist
- Permit Condition 021
  - Has the incorporation of 10 CSR 10-6.261 into Missouri's SIP been approved by the EPA? Can this be removed from the permit?
  - The emission limitation is stated in lb/MMBtu, and the operational limitation is in percent by weight. Can both limits be stated in the same units for consistency?
  - Number 2. d) of "Recordkeeping and Reporting" requires the heating value of the fuel to be stated on fuel documentation. This is not a current requirement of the existing operating permit, and would be represented by a constant fuel heating value. Can this requirement be removed?

- Number 4. of “Recordkeeping and Reporting” is redundant and captured with requirements 3. and 5. Can this requirement be removed?
- Permit Condition 022
  - We believe that numbers 1. a) and b). under “Reporting and Recordkeeping” should be omitted. The requirements are satisfied by 10 CSR 10-6.050 which is listed under the Core Permit Requirements. In addition, the timeframe stated in number 1. a) is unclear and could be interpreted that the requirement is to submit quarterly reports. However, being that the compliance method is not CEMS, quarterly reports are not necessary.
  - Number 2. d) of “Recordkeeping and Reporting” requires the heating value of the fuel to be stated on fuel documentation. This is not a current requirement of the existing operating permit, and would be represented by a constant fuel heating value. Can this requirement be removed?
  - Number 5. of “Recordkeeping and Reporting” is redundant and captured with requirements 4. and 6. Can this requirement be removed?
- General Permit Conditions – 10 CSR 10-6.020(2)(R)34 Responsible Official
  - We would like this section to read similar to that of the operating permit of Thomas Hill OP2017-061, with the following positions listed that are authorized to act in the capacity of Responsible Official
    - New Madrid Plant Manager
    - New Madrid Assistant Plant Manager
    - Title IV Designated Representative
    - Title IV Alternate Designated Representative
- Statement of Basis, Other Regulatory Determinations
  - 10 CSR 10-6.220 was also applied to permit condition 016
  - 10 CSR 10-6.260 was also applied to permit condition 021
  - 10 CSR 10-6.261 was also applied to permit condition 022

Thanks, and have a happy New Year.

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**From:** Hess, Alana <Alana.Hess@dnr.mo.gov>  
**Sent:** Wednesday, December 19, 2018 4:44 PM  
**To:** Langford, Mallory <mlangford@aeci.org>  
**Cc:** Wells, Jay <JWells@aeci.org>; Henry, Tadd <thenry@aeci.org>; Farmer, Kevin <KFarmer@aeci.org>; Pinkerton, Blake

<BPinkerton@aeci.org>

**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**\*\*EXTERNAL E-MAIL\*\* Think before clicking links or attachments.**

Mallory,

Thank you for the additional information you submitted on November 28, 2018. I have a followup question:

1. The CyClean Permit 122009-001 indicates:

CyClean has two components: A and B. CyClean Additive A is a granular material, while Cyclean Coal Additive B is a liquid. The Additive A is delivered by covered truck and unloaded onto a stockpile. A front-end loader transfers the material from the stockpile to a hopper. From the hopper, the material is transferred to a screw conveyor and delivered via a bucket elevator to the main coal conveyor belt. The Additive B is added to Additive A at the top of the bucket elevator. The CyClean coal additives are then routed along with the coal on the coal conveyor belt to the boilers.

CyClean B contains one of two halide salts in solution: sodium bromide or potassium iodine. Once in the boiler, the salts will thermally decompose in the same way as a native halide in the coal and produce HBr, Br, or the analogous iodine acid/iodine. Total halogens from the CyClean and PRB are below that of bituminous coal. Since Additive B is in a liquid form and contains no VOCs or HAPs, there are no emissions associated with its handling.

CyClean Additive A is added to the coal at a ratio of 0.006 pound of CyClean Additive A to each pound of coal. Based on a coal maximum rate of 738 tons per hour, CyClean Additive A will be added at maximum hourly design rate of 4.43 tons per hour.

If CyClean Additive A is still in use, I need to add its stockpile and handling equipment (which are emission sources) to the permit. As noted in Permit 122009-001 no emissions are associated with the storage and handling of CyClean Additive B. So, is Cyclean Additive A still in use?

I'll be watching for your comments on the draft permit on December 31, 2018.

Have a happy holiday season!

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources.*

*Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at*

*[https://secure-web.cisco.com/1iPldXclcfOLJhFzP7q5z7PdFKak75Mul78MVj7DkXFp5sy4OBe6fLGcy8vUovEVMF1MuHVS1xjRxV5lwld2cd\\_FHHzrGXau2VmovWtijCE3oPUdI24NxaseLNoFmWKKzHY98i1MfTKdbOmeX8MYN8QqpJa2H0VRGGx0PvrPyUhY-WQT4G\\_1m-hp4n7rIUlqjViHkIEEO2ebkMS\\_Jj6h4M8GDfCvp3vXn8mRcndEMGqcum026R0mdi-YOoCo56uVMXTMaY6\\_ytSKv9MwBZs1lnQ/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1iPldXclcfOLJhFzP7q5z7PdFKak75Mul78MVj7DkXFp5sy4OBe6fLGcy8vUovEVMF1MuHVS1xjRxV5lwld2cd_FHHzrGXau2VmovWtijCE3oPUdI24NxaseLNoFmWKKzHY98i1MfTKdbOmeX8MYN8QqpJa2H0VRGGx0PvrPyUhY-WQT4G_1m-hp4n7rIUlqjViHkIEEO2ebkMS_Jj6h4M8GDfCvp3vXn8mRcndEMGqcum026R0mdi-YOoCo56uVMXTMaY6_ytSKv9MwBZs1lnQ/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey)*

*Thank you.*

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**From:** Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>

**Sent:** Wednesday, November 28, 2018 3:12 PM

**To:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>

**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>

**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

Below are the answers to your questions that you sent on October 30<sup>th</sup>. Please let me know if you need additional clarification or have any more questions.

As mentioned in my November 19<sup>th</sup> email, we are still in the process of reviewing the draft permit and compiling our comments. We would like to extend the due date of our comments to December 31<sup>st</sup>. Please let us know if this is an issue.

1. Now that the landfill is in operation, is FE-03 Fly Ash Unloading to the Ash Ponds still an active emission source? I.e., does FE-03 need to remain in the permit?  
New Madrid is placing fly ash in the lined ash pond under the beneficial reuse exception. Therefore, FE-03 will need to remain active for 2018RY and 2019RY EIQ purposes.
2. Does the installation use CyClean still? I.e., do the CyClean emission sources need to be included in the permit?  
Construction permit number 122010-012 addresses the use of CyClean in the cyclone boilers. New Madrid Units 1 and 2 have a limit of 0.55 lb/MMBtu on a 30-day rolling average, along with an annual limit of 34,449 tons per year. The Cycleclean operation itself is not an emission source.
3. Questions regarding IA-04 (5) Glycol tanks and IA-18 Glycol Heater Vents:
  - a. By Glycol do you mean Ethylene Glycol (107-21-1)? If not, ethylene glycol, would you please provide a CAS # or SDS for the glycol? This doesn't really have any permitting implications, I'm just trying to get accurate information for the PTE in the Statement of Basis.  
The plant uses ethylene glycol (inhibited).
  - b. What is this glycol used for? This doesn't really have any permitting implications, I'm just trying to get accurate information for the installation/emission source description in the Statement of Basis.  
The glycol is used to preheat combustion air in the boiler. It is also used to vaporize ammonia as part of the SCR process.
  - c. Is the heater electric or does it combust fuel? If it combusts fuel:  
The glycol heaters are electric fans flowing across heater coils filled with warm glycol. There is no fuel combustion.
    - i. Please indicate the type and MHDR.
    - ii. Please explain why AECl believes this heater does or does not meet the MACT DDDDD definition of process heater.
4. Could you describe IA-20 Soot Blowing Air Compressor Vents in more detail? Please explain why AECl believes this emission source does or does not emit visible emissions.  
The soot blowing air compressors are electric, and the vents are designed to allow compressed air to vent so the system does not over pressurize.
5. Please explain why AECl believes IA (2) 2.29 MMBtu/hr LPG-fired heaters and (2) 2 MMBtu/hr LPG-fired heaters do or do not meet the MACT DDDDD definition of process heater.  
The heaters are being used for intermittent space heating only. The heaters are located at the circulating water pumps and are used to prevent the traveling screens from freezing in the winter. They are not used every year,

but operated only when they are needed. As per the definition of a process heater (40 CFR Part 63.7575), "Process heaters do not include units used for comfort heat or space heat".

6. Would you please submit your phenol emission factors for EP-01 and EP-02 that were used to determine EIQ emissions? I was able to locate a phenol emission factor in AP-42 of 1.6E-5 lb/ton; however, using it results in lower potential emissions than actual reported emissions in the 2017, 2016, 2015, 2014, and 2013 EIQs. I'm guessing that you all are using some type of site specific value. This doesn't have any permitting implications, I just want to provide an accurate phenol PTE in the statement of basis.
- For the 2013 through 2017 EIQ's, New Madrid used the Electric Power Research Institute (EPRI) mean of 3.3 lb/TBtu. Additional conversions must be used to arrive to the pounds of phenol produced.

Thanks,

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**From:** Langford, Mallory  
**Sent:** Monday, November 19, 2018 2:49 PM  
**To:** 'Hess, Alana' <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

We've continued to review the New Madrid draft permit, but due to all the changes being incorporated, we will not have our comments available by the end of the month. We would like to request another extension with the due date of December 31, 2018.

We still plan to have the answers to your questions available by November 30, 2018.

Thank you for the consideration.

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**From:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Sent:** Wednesday, October 31, 2018 12:17 PM  
**To:** Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
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**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**\*\*EXTERNAL E-MAIL\*\* Think before clicking links or attachments.**

Extension granted. I'll look for your comments and responses on November 30, 2018. Have a Happy Halloween and Thanksgiving!

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
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(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at <https://secure-web.cisco.com/1nIEAxbmahA8TbDKwe3Ujn9BduUBdBiynbdpVXEutsLe1Q9k47NYQ5xbrqzCmyMQM4HzLCvDJyaLNIsAS3qzsITs-y5PAqAfLftw9E1O5mmSL-FbjCNgffniyIBfLFiyQ69CyW7D3sHXtucrtGwT3VvVR6nHNKm-IOdmAX6SDhxfUqqnraObrTQFzXBvDHG8wg9sqkNRPnDICoxmfSUu9dmMmp0LIQZ16up9mPyvBvQvc0rTu-6MLauo0T2RQ17qeIWB2-iU5eF-au0aala/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey>. Thank you.*

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**From:** Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
**Sent:** Wednesday, October 31, 2018 11:21 AM  
**To:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

Thank you for the draft operating permit and questions, we have begun reviewing both. Due to the complexity of the operating permit, we would like to request that the due date for the comments and questions be extended to November 30, 2018.

Thank you for the consideration,

Mallory Langford  
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**Sent:** Tuesday, October 30, 2018 3:55 PM  
**To:** Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>; Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**\*\*EXTERNAL E-MAIL\*\* Think before clicking links or attachments.**

Ms. Langford,

Thank you for submitting additional information on August 17, 2018.

Would you please provide answers to the following additional questions I have about the installation by **November 14, 2018**?

1. Now that the landfill is in operation, is FE-03 Fly Ash Unloading to the Ash Ponds still an active emission source? I.e., does FE-03 need to remain in the permit?
2. Does the installation use CyClean still? I.e., do the CyClean emission sources need to be included in the permit?
3. Questions regarding IA-04 (5) Glycol tanks and IA-18 Glycol Heater Vents:
  - a. By Glycol do you mean Ethylene Glycol (107-21-1)? If not, ethylene glycol, would you please provide a CAS # or SDS for the glycol? This doesn't really have any permitting implications, I'm just trying to get accurate information for the PTE in the Statement of Basis.
  - b. What is this glycol used for? This doesn't really have any permitting implications, I'm just trying to get accurate information for the installation/emission source description in the Statement of Basis.
  - c. Is the heater electric or does it combust fuel? If it combusts fuel:
    - i. Please indicate the type and MHDR.
    - ii. Please explain why AECI believes this heater does or does not meet the MACT DDDDD definition of process heater.

4. Could you describe IA-20 Soot Blowing Air Compressor Vents in more detail? Please explain why AECl believes this emission source does or does not emit visible emissions.
5. Please explain why AECl believes IA (2) 2.29 MMBtu/hr LPG-fired heaters and (2) 2 MMBtu/hr LPG-fired heaters do or do not meet the MACT DDDDD definition of process heater.
6. Would you please submit your phenol emission factors for EP-01 and EP-02 that were used to determine EIQ emissions? I was able to locate a phenol emission factor in AP-42 of 1.6E-5 lb/ton; however, using it results in lower potential emissions than actual reported emissions in the 2017, 2016, 2015, 2014, and 2013 EIQs. I'm guessing that you all are using some type of site specific value. This doesn't have any permitting implications, I just want to provide an accurate phenol PTE in the statement of basis.

Attached is a mainly complete draft operating permit. Please review the draft and submit any questions/comments you may have by **November 14, 2018**.

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at [https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3llyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloiolXmJWZ1Y0G0ZqQTr\\_bjtWTPdL\\_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCh12Gb5awb3gRVI8b\\_WgsRfb\\_8INJpwYL0wmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx\\_dXmY9mOIT86wylj6cEKvam76fM1I0N8l62clg/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3llyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloiolXmJWZ1Y0G0ZqQTr_bjtWTPdL_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCh12Gb5awb3gRVI8b_WgsRfb_8INJpwYL0wmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx_dXmY9mOIT86wylj6cEKvam76fM1I0N8l62clg/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey). Thank you.*

---

**From:** Hess, Alana  
**Sent:** Friday, August 3, 2018 2:54 PM  
**To:** 'Pinkerton, Blake' <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Blake,

I am still working on New Madrid's operating permit. I wondered if you could answer a few questions for me:

1. For MATS does New Madrid use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit? I.e. is New Madrid complying with §63.10000(c)(1)(vi)(A) or §63.10000(c)(1)(vi)(B)?
2. According to page SB-4 of Operating Permit OP2010-116B, the Barge River Pumps are used to pump cooling water during low river flow. How does New Madrid pump their cooling water during normal/high river flow?
3. MoEIS includes an EP-10 Internal Combustion Engines Industrial – Large Bore Engine Diesel Fuel Fired which is labelled as active for the installation; however, I cannot locate this engine(s) anywhere in the previous operating permit or application. Please indicate if this is still an active emission source. If it is please provide the number of engines, size of each engine, and model year of each engine.
4. Please submit your Phase II NOx Compliance Plan (and Phase II NOx Averaging Plan if applicable) for Boilers 1 and 2.

5. Please submit a CAIR Permit application. Although rescinded on the federal level, the CAIR program remains in our State Implementation Plan (SIP); therefore, technically we still have to have a CAIR permit in the Part 70 as CAIR is technically still an applicable requirement. We are working on removing CAIR requirements from our SIP.

Please try to provide this information by August 20, 2018.

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at [https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3llyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloiolXmJWZ1Y0G0ZqQTr\\_bjtWTPdL\\_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkdt8pZThUCh12Gb5awb3qRVI8b\\_WqsRfb\\_8INJpwYLOwmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx\\_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3llyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloiolXmJWZ1Y0G0ZqQTr_bjtWTPdL_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkdt8pZThUCh12Gb5awb3qRVI8b_WqsRfb_8INJpwYLOwmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey). Thank you.*

---

**From:** Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Sent:** Monday, April 10, 2017 4:27 PM  
**To:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Ms. Hess,

Please see the responses to your questions below regarding our New Madrid Power Plant.

Please provide answers to the following questions:

1. Are the two 2.4 MMBtu/hr fuel oil heaters in No Construction Permit Required Determination 2016-01-004 (2016-01-004.pdf) EU0290 and EU0300 Tioga Heaters or are these different heaters? **The Tioga Heaters referenced as EU0290 and EU0300 are hard piped stationary units used at the crusher house. The units referenced in the No Construction Permit Required Determination are the same type/size, but skid mounted (portable) and rented for short term use during the winter months.**
2. No Construction Permit Required Determination 2012-06-072 states that you planned to use 14 275 HP barge pumps instead of EP-09 8 300 HP barge pumps and EP-13 2 345 HP barge pumps. Did this change occur? **The change did not occur. Still have the 8 as EP-09 and 2 as EP-13.**
3. How many acres are active at any given time in the landfill? **Each cell is 25 acres. Only 1 cell will be "active" at a time. Currently using Phase L- Cell 1, will switch to Phase III – Cell 2 when full.**
4. Construction Permit 092006-004 states that Boilers 1 and 2 have an MHDR of 7,150 MMBtu/hr, EPA's Air Markets Program indicates that Boiler 1 has an MHDR of 6,728 MMBtu/hr and Boiler 2 has an MHDR of 6,985 MMBtu/hr; however, the previous operating permit and your application state the MHDRs are only 6,340 MMBtu/hr. Please explain these discrepancies. EPA generally requires us to use the MHDR in the Air Markets Program unless sufficient justification can be provided for an increase/decrease in the MHDR... **I do not have the historical data on this but**

the higher number may have been used to represent the higher BTU Illinois coal before the switch to PRB. We are not opposed to using the numbers listed in the Air Markets Program but what would the implications be for using those numbers if it is found that the 6,340 MMBtu/hr is a better number?

5. Would you please send me a copy of New Madrid's MATS initial NOC? I have attached a copy to this email.

---

**From:** Hess, Alana [<mailto:Alana.Hess@dnr.mo.gov>]

**Sent:** Wednesday, March 29, 2017 3:01 PM

**To:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>

**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Mr. Wells,

Please provide answers to the following questions:

1. Are the two 2.4 MMBtu/hr fuel oil heaters in No Construction Permit Required Determination 2016-01-004 (2016-01-004.pdf) EU0290 and EU0300 Tioga Heaters or are these different heaters?
2. No Construction Permit Required Determination 2012-06-072 states that you planned to use 14 275 HP barge pumps instead of EP-09 8 300 HP barge pumps and EP-13 2 345 HP barge pumps. Did this change occur?
3. How many acres are active at any given time in the landfill?
4. Construction Permit 092006-004 states that Boilers 1 and 2 have an MHDR of 7,150 MMBtu/hr, EPA's Air Markets Program indicates that Boiler 1 has an MHDR of 6,728 MMBtu/hr and Boiler 2 has an MHDR of 6,985 MMBtu/hr; however, the previous operating permit and your application state the MHDRs are only 6,340 MMBtu/hr. Please explain these discrepancies. EPA generally requires us to use the MHDR in the Air Markets Program unless sufficient justification can be provided for an increase/decrease in the MHDR...
5. Would you please send me a copy of New Madrid's MATS initial NOC?

*Alana L. Hess, PE*

Environmental Engineer III

Missouri Department of Natural Resources

Phone: (573) 526-0189

Fax: (573) 751-2706

E-mail: [alana.hess@dnr.mo.gov](mailto:alana.hess@dnr.mo.gov)

Mailing Address:

Air Pollution Control Program – Permits Section

Attn: Alana Hess

P.O. Box 176

Jefferson City, MO 65102

---

**From:** Hess, Alana

**Sent:** Tuesday, March 28, 2017 10:41 AM

**To:** 'jwells@aeci.org'; [thenry@aeci.org](mailto:thenry@aeci.org)

**Subject:** 2015-04-093 New Madrid Power Plant (143-0004)

Mr. Wells,

My name is Alana Hess. I am an Environmental Engineer with the Missouri Department of Natural Resources' Air Pollution Control Program. I have been assigned to review the Part 70 operating permit renewal application, Project 2015-04-093, for New Madrid Power Plant (143-0004).

I may have questions for you throughout my review and drafting of the permit. Please respond to all questions within 15 days. An extension is available upon request.

I look forward to working with you.

Thanks,

*Alana L. Hess*, PE  
Environmental Engineer III  
Missouri Department of Natural Resources

Phone: (573) 526-0189  
Fax: (573) 751-2706  
E-mail: [alana.hess@dnr.mo.gov](mailto:alana.hess@dnr.mo.gov)

Mailing Address:  
Air Pollution Control Program – Permits Section  
Attn: Alana Hess  
P.O. Box 176  
Jefferson City, MO 65102

## Hess, Alana

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**From:** Hess, Alana  
**Sent:** Wednesday, December 19, 2018 4:44 PM  
**To:** 'Langford, Mallory'  
**Cc:** Wells, Jay; Henry, Tadd; Farmer, Kevin; Pinkerton, Blake  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Mallory,

Thank you for the additional information you submitted on November 28, 2018. I have a followup question:

1. The CyClean Permit 122009-001 indicates:

CyClean has two components: A and B. CyClean Additive A is a granular material, while CyClean Coal Additive B is a liquid. The Additive A is delivered by covered truck and unloaded onto a stockpile. A front-end loader transfers the material from the stockpile to a hopper. From the hopper, the material is transferred to a screw conveyor and delivered via a bucket elevator to the main coal conveyor belt. The Additive B is added to Additive A at the top of the bucket elevator. The CyClean coal additives are then routed along with the coal on the coal conveyor belt to the boilers.

CyClean B contains one of two halide salts in solution: sodium bromide or potassium iodine. Once in the boiler, the salts will thermally decompose in the same way as a native halide in the coal and produce HBr, Br, or the analogous iodine acid/iodine. Total halogens from the CyClean and PRB are below that of bituminous coal. Since Additive B is in a liquid form and contains no VOCs or HAPs, there are no emissions associated with its handling.

CyClean Additive A is added to the coal at a ratio of 0.006 pound of CyClean Additive A to each pound of coal. Based on a coal maximum rate of 738 tons per hour, CyClean Additive A will be added at maximum hourly design rate of 4.43 tons per hour.

If CyClean Additive A is still in use, I need to add its stockpile and handling equipment (which are emission sources) to the permit. As noted in Permit 122009-001 no emissions are associated with the storage and handling of CyClean Additive B. So, is CyClean Additive A still in use?

I'll be watching for your comments on the draft permit on December 31, 2018.

Have a happy holiday season!

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at <https://www.surveymonkey.com/r/MoDNRsurvey>. Thank you.*

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**From:** Langford, Mallory <mlangford@aeci.org>  
**Sent:** Wednesday, November 28, 2018 3:12 PM

**To:** Hess, Alana <Alana.Hess@dnr.mo.gov>

**Cc:** Wells, Jay <JWells@aeci.org>; Henry, Tadd <thenry@aeci.org>; Farmer, Kevin <KFarmer@aeci.org>; Pinkerton, Blake <BPinkerton@aeci.org>

**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

Below are the answers to your questions that you sent on October 30<sup>th</sup>. Please let me know if you need additional clarification or have any more questions.

As mentioned in my November 19<sup>th</sup> email, we are still in the process of reviewing the draft permit and compiling our comments. We would like to extend the due date of our comments to December 31<sup>st</sup>. Please let us know if this is an issue.

1. Now that the landfill is in operation, is FE-03 Fly Ash Unloading to the Ash Ponds still an active emission source? I.e., does FE-03 need to remain in the permit?  
New Madrid is placing fly ash in the lined ash pond under the beneficial reuse exception. Therefore, FE-03 will need to remain active for 2018RY and 2019RY EIQ purposes.
2. Does the installation use CyClean still? I.e., do the CyClean emission sources need to be included in the permit?  
Construction permit number 122010-012 addresses the use of CyClean in the cyclone boilers. New Madrid Units 1 and 2 have a limit of 0.55 lb/MMBtu on a 30-day rolling average, along with an annual limit of 34,449 tons per year. The CyClean operation itself is not an emission source.
3. Questions regarding IA-04 (5) Glycol tanks and IA-18 Glycol Heater Vents:
  - a. By Glycol do you mean Ethylene Glycol (107-21-1)? If not, ethylene glycol, would you please provide a CAS # or SDS for the glycol? This doesn't really have any permitting implications, I'm just trying to get accurate information for the PTE in the Statement of Basis.  
The plant uses ethylene glycol (inhibited).
  - b. What is this glycol used for? This doesn't really have any permitting implications, I'm just trying to get accurate information for the installation/emission source description in the Statement of Basis.  
The glycol is used to preheat combustion air in the boiler. It is also used to vaporize ammonia as part of the SCR process.
  - c. Is the heater electric or does it combust fuel? If it combusts fuel:  
The glycol heaters are electric fans flowing across heater coils filled with warm glycol. There is no fuel combustion.
    - i. Please indicate the type and MHDR.
    - ii. Please explain why AECl believes this heater does or does not meet the MACT DDDDD definition of process heater.
4. Could you describe IA-20 Soot Blowing Air Compressor Vents in more detail? Please explain why AECl believes this emission source does or does not emit visible emissions.  
The soot blowing air compressors are electric, and the vents are designed to allow compressed air to vent so the system does not over pressurize.
5. Please explain why AECl believes IA (2) 2.29 MMBtu/hr LPG-fired heaters and (2) 2 MMBtu/hr LPG-fired heaters do or do not meet the MACT DDDDD definition of process heater.  
The heaters are being used for intermittent space heating only. The heaters are located at the circulating water pumps and are used to prevent the traveling screens from freezing in the winter. They are not used every year, but operated only when they are needed. As per the definition of a process heater (40 CFR Part 63.7575), "Process heaters do not include units used for comfort heat or space heat".



6. Would you please submit your phenol emission factors for EP-01 and EP-02 that were used to determine EIQ emissions? I was able to locate a phenol emission factor in AP-42 of 1.6E-5 lb/ton; however, using it results in lower potential emissions than actual reported emissions in the 2017, 2016, 2015, 2014, and 2013 EIQs. I'm guessing that you all are using some type of site specific value. This doesn't have any permitting implications, I just want to provide an accurate phenol PTE in the statement of basis.
- For the 2013 through 2017 EIQ's, New Madrid used the Electric Power Research Institute (EPRI) mean of 3.3 lb/TBtu. Additional conversions must be used to arrive to the pounds of phenol produced.

Thanks,

Mallory Langford  
Environmental Analyst  
2814 S. Golden Ave.  
Springfield, MO 65807

(417) 371-5237 Office  
(816) 787-7431 Cell  
[mlangford@aeci.org](mailto:mlangford@aeci.org)



---

**From:** Langford, Mallory  
**Sent:** Monday, November 19, 2018 2:49 PM  
**To:** 'Hess, Alana' <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

We've continued to review the New Madrid draft permit, but due to all the changes being incorporated, we will not have our comments available by the end of the month. We would like to request another extension with the due date of December 31, 2018.

We still plan to have the answers to your questions available by November 30, 2018.

Thank you for the consideration.

Mallory Langford  
Environmental Analyst  
2814 S. Golden Ave.  
Springfield, MO 65807

(417) 371-5237 Office  
(816) 787-7431 Cell  
[mlangford@aeci.org](mailto:mlangford@aeci.org)



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**From:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Sent:** Wednesday, October 31, 2018 12:17 PM  
**To:** Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**\*\*EXTERNAL E-MAIL\*\* Think before clicking links or attachments.**

Extension granted. I'll look for your comments and responses on November 30, 2018. Have a Happy Halloween and Thanksgiving!

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at [https://secure-web.cisco.com/1nIEAxbmahA8TbDKwe3Ujn9BduUBdBiynbdpVXEutsLe1Q9k47NYQ5xbrqzCmyMQM4HzLCvDJy\\_aLN\\_IsAS3qzsITs-y5\\_PAqAfLftw9E1O5mmSL-FbjCNqffniylBfLFiyQ69CyW7D3sHXtucrtGwT3VvVR6nHNKm-IQdmAX6SDhxfUqqnraObrTQFzXBvDHG8wq9sqkNRPNdICoxmfSUu9dmMmp0LIQZ16up9mPyvBvQvc0rTu-6MLauo0T2\\_RQ17qeIWB2-iU5eF-au0aala/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1nIEAxbmahA8TbDKwe3Ujn9BduUBdBiynbdpVXEutsLe1Q9k47NYQ5xbrqzCmyMQM4HzLCvDJy_aLN_IsAS3qzsITs-y5_PAqAfLftw9E1O5mmSL-FbjCNqffniylBfLFiyQ69CyW7D3sHXtucrtGwT3VvVR6nHNKm-IQdmAX6SDhxfUqqnraObrTQFzXBvDHG8wq9sqkNRPNdICoxmfSUu9dmMmp0LIQZ16up9mPyvBvQvc0rTu-6MLauo0T2_RQ17qeIWB2-iU5eF-au0aala/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey). Thank you.*

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**From:** Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
**Sent:** Wednesday, October 31, 2018 11:21 AM  
**To:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>; Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Alana,

Thank you for the draft operating permit and questions, we have begun reviewing both. Due to the complexity of the operating permit, we would like to request that the due date for the comments and questions be extended to November 30, 2018.

Thank you for the consideration,

Mallory Langford  
Environmental Analyst  
2814 S. Golden Ave.  
Springfield, MO 65807

(417) 371-5237 Office  
(816) 787-7431 Cell  
[mlangford@aeci.org](mailto:mlangford@aeci.org)



---

**From:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Sent:** Tuesday, October 30, 2018 3:55 PM  
**To:** Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>; Langford, Mallory <[mlangford@aeci.org](mailto:mlangford@aeci.org)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

**\*\*EXTERNAL E-MAIL\*\* Think before clicking links or attachments.**

Ms. Langford,

Thank you for submitting additional information on August 17, 2018.

Would you please provide answers to the following additional questions I have about the installation by **November 14, 2018**?

1. Now that the landfill is in operation, is FE-03 Fly Ash Unloading to the Ash Ponds still an active emission source? I.e., does FE-03 need to remain in the permit?
2. Does the installation use CyClean still? I.e., do the CyClean emission sources need to be included in the permit?
3. Questions regarding IA-04 (5) Glycol tanks and IA-18 Glycol Heater Vents:
  - a. By Glycol do you mean Ethylene Glycol (107-21-1)? If not, ethylene glycol, would you please provide a CAS # or SDS for the glycol? This doesn't really have any permitting implications, I'm just trying to get accurate information for the PTE in the Statement of Basis.
  - b. What is this glycol used for? This doesn't really have any permitting implications, I'm just trying to get accurate information for the installation/emission source description in the Statement of Basis.
  - c. Is the heater electric or does it combust fuel? If it combusts fuel:
    - i. Please indicate the type and MHDR.
    - ii. Please explain why AECI believes this heater does or does not meet the MACT DDDDD definition of process heater.
4. Could you describe IA-20 Soot Blowing Air Compressor Vents in more detail? Please explain why AECI believes this emission source does or does not emit visible emissions.
5. Please explain why AECI believes IA (2) 2.29 MMBtu/hr LPG-fired heaters and (2) 2 MMBtu/hr LPG-fired heaters do or do not meet the MACT DDDDD definition of process heater.
6. Would you please submit your phenol emission factors for EP-01 and EP-02 that were used to determine EIQ emissions? I was able to locate a phenol emission factor in AP-42 of 1.6E-5 lb/ton; however, using it results in

lower potential emissions than actual reported emissions in the 2017, 2016, 2015, 2014, and 2013 EIQs. I'm guessing that you all are using some type of site specific value. This doesn't have any permitting implications, I just want to provide an accurate phenol PTE in the statement of basis.

Attached is a mainly complete draft operating permit. Please review the draft and submit any questions/comments you may have by **November 14, 2018**.

Thanks,

*Alana L. Hess, P.E.*  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at [https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3Ilyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloioIlxXmJWZ1Y0G0ZqQTr\\_bjtWTPdL\\_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCH12Gb5awb3qRVI8b\\_WqsRfb\\_8INJpwYLOwmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx\\_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3Ilyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloioIlxXmJWZ1Y0G0ZqQTr_bjtWTPdL_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCH12Gb5awb3qRVI8b_WqsRfb_8INJpwYLOwmxrJrNOBPubnqcQEDcGSTVQw-FcdwLMsqW1aIJa1C4Z4qBTLEfx_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey). Thank you.*

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**From:** Hess, Alana  
**Sent:** Friday, August 3, 2018 2:54 PM  
**To:** 'Pinkerton, Blake' <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Blake,

I am still working on New Madrid's operating permit. I wondered if you could answer a few questions for me:

1. For MATS does New Madrid use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit? I.e. is New Madrid complying with §63.10000(c)(1)(vi)(A) or §63.10000(c)(1)(vi)(B)?
2. According to page SB-4 of Operating Permit OP2010-116B, the Barge River Pumps are used to pump cooling water during low river flow. How does New Madrid pump their cooling water during normal/high river flow?
3. MoEIS includes an EP-10 Internal Combustion Engines Industrial – Large Bore Engine Diesel Fuel Fired which is labelled as active for the installation; however, I cannot located this engine(s) anywhere in the previous operating permit or application. Please indicate if this is still an active emission source. If it is please provide the number of engines, size of each engine, and model year of each engine.
4. Please submit your Phase II NOx Compliance Plan (and Phase II NOx Averaging Plan if applicable) for Boilers 1 and 2.
5. Please submit a CAIR Permit application. Although rescinded on the federal level, the CAIR program remains in our State Implementation Plan (SIP); therefore, technically we still have to have a CAIR permit in the Part 70 as CAIR is technically still an applicable requirement. We are working on removing CAIR requirements from our SIP.

Please try to provide this information by August 20, 2018.

Thanks,

Alana L. Hess, P.E.  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
(573) 526-0189

*We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at [https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3Ilyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloioIlxXmJWZ1Y0G0ZqQTr\\_bjtWTPdL\\_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCh12Gb5awb3qRVl8b\\_WqsRfb\\_8INJpwYLOwmxrJrNOBpubngcQEDcGSTVQw-FcdwLMsqW1aJJa1C4Z4qBTLEfx\\_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey](https://secure-web.cisco.com/1xkfVR8PbsX-JkyGxZ6id1X3Ilyi5yMskhjlrzQR6dsAdXqwbwUWWCHQKloioIlxXmJWZ1Y0G0ZqQTr_bjtWTPdL_Qe5jckVmlJwKpu-vPWzcWen7IArchLuifWm92FJIn99oUHBvjGclK5KGdkt8pZThUCh12Gb5awb3qRVl8b_WqsRfb_8INJpwYLOwmxrJrNOBpubngcQEDcGSTVQw-FcdwLMsqW1aJJa1C4Z4qBTLEfx_dXmY9mOIT86wylj6cEKvam76fM1I0N8I62clq/https%3A%2F%2Fwww.surveymonkey.com%2Fr%2FMoDNRsurvey). Thank you.*

---

**From:** Pinkerton, Blake <[BPinkerton@aeci.org](mailto:BPinkerton@aeci.org)>  
**Sent:** Monday, April 10, 2017 4:27 PM  
**To:** Hess, Alana <[Alana.Hess@dnr.mo.gov](mailto:Alana.Hess@dnr.mo.gov)>  
**Cc:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>; Farmer, Kevin <[KFarmer@aeci.org](mailto:KFarmer@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Ms. Hess,

Please see the responses to your questions below regarding our New Madrid Power Plant.

Please provide answers to the following questions:

1. Are the two 2.4 MMBtu/hr fuel oil heaters in No Construction Permit Required Determination 2016-01-004 (2016-01-004.pdf) EU0290 and EU0300 Tioga Heaters or are these different heaters? **The Tioga Heaters referenced as EU0290 and EU0300 are hard piped stationary units used at the crusher house. The units referenced in the No Construction Permit Required Determination are the same type/size, but skid mounted (portable) and rented for short term use during the winter months.**
2. No Construction Permit Required Determination 2012-06-072 states that you planned to use 14 275 HP barge pumps instead of EP-09 8 300 HP barge pumps and EP-13 2 345 HP barge pumps. Did this change occur? **The change did not occur. Still have the 8 as EP-09 and 2 as EP-13.**
3. How many acres are active at any given time in the landfill? **Each cell is 25 acres. Only 1 cell will be "active" at a time. Currently using Phase L- Cell 1, will switch to Phase III – Cell 2 when full.**
4. Construction Permit 092006-004 states that Boilers 1 and 2 have an MHDR of 7,150 MMBtu/hr, EPA's Air Markets Program indicates that Boiler 1 has an MHDR of 6,728 MMBtu/hr and Boiler 2 has an MHDR of 6,985 MMBtu/hr; however, the previous operating permit and your application state the MHDRs are only 6,340 MMBtu/hr. Please explain these discrepancies. EPA generally requires us to use the MHDR in the Air Markets Program unless sufficient justification can be provided for an increase/decrease in the MHDR... **I do not have the historical data on this but the higher number may have been used to represent the higher BTU Illinois coal before the switch to PRB. We are not opposed to using the numbers listed in the Air Markets Program but what would the implications be for using those numbers if it is found that the 6,340 MMBtu/hr is a better number?**
5. Would you please send me a copy of New Madrid's MATS initial NOC? **I have attached a copy to this email.**

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**From:** Hess, Alana [<mailto:Alana.Hess@dnr.mo.gov>]  
**Sent:** Wednesday, March 29, 2017 3:01 PM  
**To:** Wells, Jay <[JWells@aeci.org](mailto:JWells@aeci.org)>; Henry, Tadd <[thenry@aeci.org](mailto:thenry@aeci.org)>  
**Subject:** RE: 2015-04-093 New Madrid Power Plant (143-0004)

Mr. Wells,

Please provide answers to the following questions:

1. Are the two 2.4 MMBtu/hr fuel oil heaters in No Construction Permit Required Determination 2016-01-004 (2016-01-004.pdf) EU0290 and EU0300 Tioga Heaters or are these different heaters?
2. No Construction Permit Required Determination 2012-06-072 states that you planned to use 14 275 HP barge pumps instead of EP-09 8 300 HP barge pumps and EP-13 2 345 HP barge pumps. Did this change occur?
3. How many acres are active at any given time in the landfill?
4. Construction Permit 092006-004 states that Boilers 1 and 2 have an MHDR of 7,150 MMBtu/hr, EPA's Air Markets Program indicates that Boiler 1 has an MHDR of 6,728 MMBtu/hr and Boiler 2 has an MHDR of 6,985 MMBtu/hr; however, the previous operating permit and your application state the MHDRs are only 6,340 MMBtu/hr. Please explain these discrepancies. EPA generally requires us to use the MHDR in the Air Markets Program unless sufficient justification can be provided for an increase/decrease in the MHDR...
5. Would you please send me a copy of New Madrid's MATS initial NOC?

*Alana L. Hess, PE*  
Environmental Engineer III  
Missouri Department of Natural Resources

Phone: (573) 526-0189  
Fax: (573) 751-2706  
E-mail: [alana.hess@dnr.mo.gov](mailto:alana.hess@dnr.mo.gov)

Mailing Address:  
Air Pollution Control Program – Permits Section  
Attn: Alana Hess  
P.O. Box 176  
Jefferson City, MO 65102

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**From:** Hess, Alana  
**Sent:** Tuesday, March 28, 2017 10:41 AM  
**To:** 'jwells@aeci.org'; [thenry@aeci.org](mailto:thenry@aeci.org)  
**Subject:** 2015-04-093 New Madrid Power Plant (143-0004)

Mr. Wells,

My name is Alana Hess. I am an Environmental Engineer with the Missouri Department of Natural Resources' Air Pollution Control Program. I have been assigned to review the Part 70 operating permit renewal application, Project 2015-04-093, for New Madrid Power Plant (143-0004).

I may have questions for you throughout my review and drafting of the permit. Please respond to all questions within 15 days. An extension is available upon request.

I look forward to working with you.

Thanks,

*Alana L. Hess*, PE  
Environmental Engineer III  
Missouri Department of Natural Resources

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